Introduction to Knovel

http://app.knovel.com

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Knovel

LIBRARY
Read. Research. Discover.

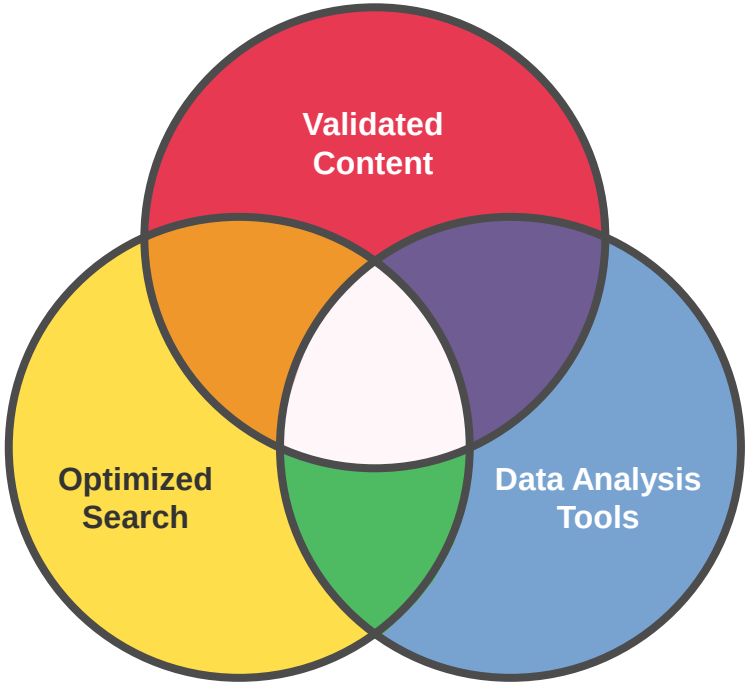
Know More. Search Less.

Agenda

- **About Knovel**
- **What content is in Knovel (AIT)**
- **Who is using Knovel for Teaching & Learning**
- **Key Features & Highlights**
  - Search Optimized for Engineers and Scientists
  - Data Search & Data Analysis Tools integrated into Engineering Workflow
  - Interactive Tools – Graph Digitizer & Equation Plotter
- **My Knovel ToGo – Mobile Tablet Reader**

About Knovel

Knovel is a **web-based application** integrating **technical information** with **analytical & search tools** which **drive innovation** and **deliver answers** engineers can trust

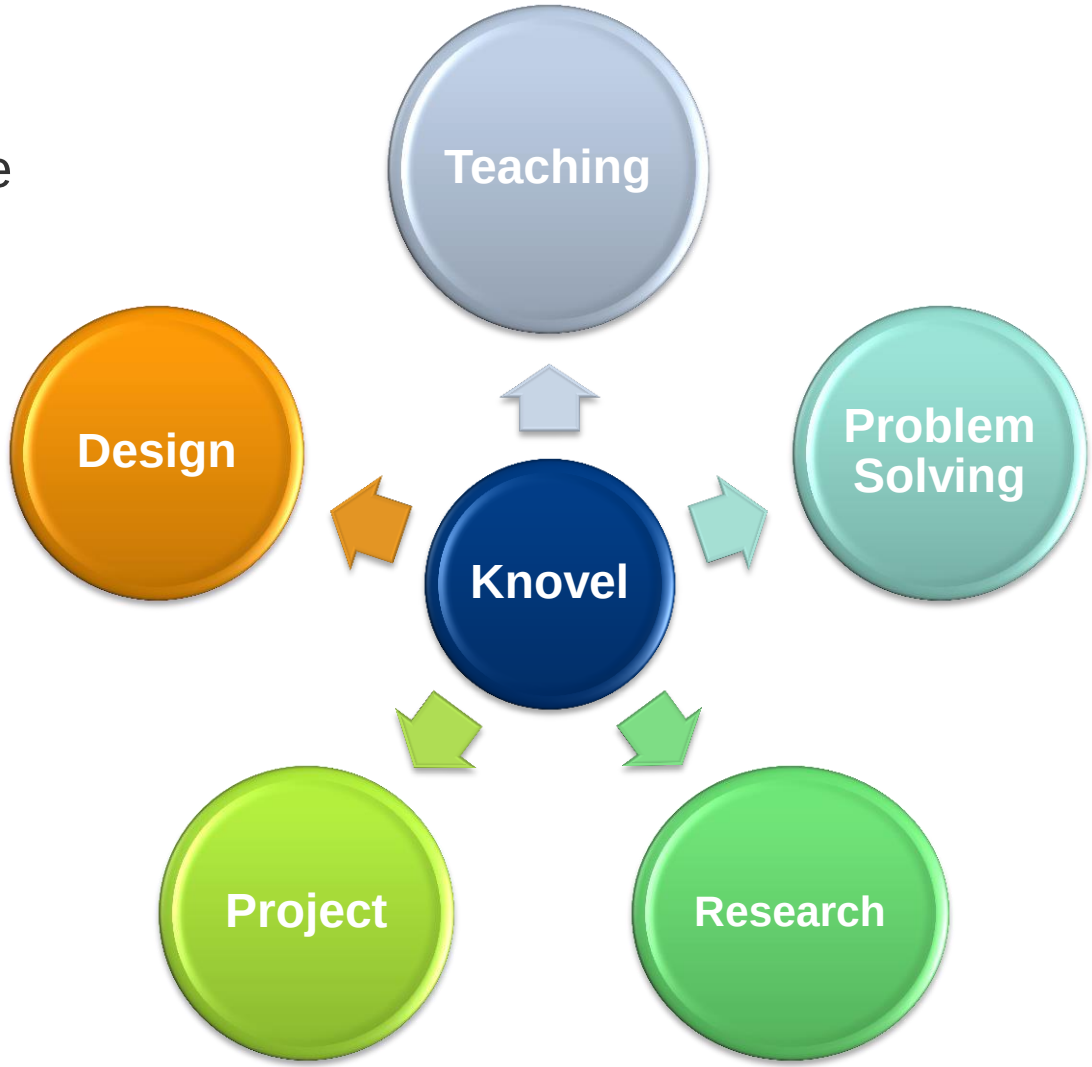


Knovel delivers answers engineers can trust and ultimately drives innovation.

About Knovel

Multiple applications to fit all the needs of academic institutions

Widely embraced by worldwide academic institutions to **enhance innovation and design activities** and achieve **teaching excellence** so as to **produce successful engineers**



Broadest Quality Content from Relevant Sources

Broadest Content from Diversified Sources

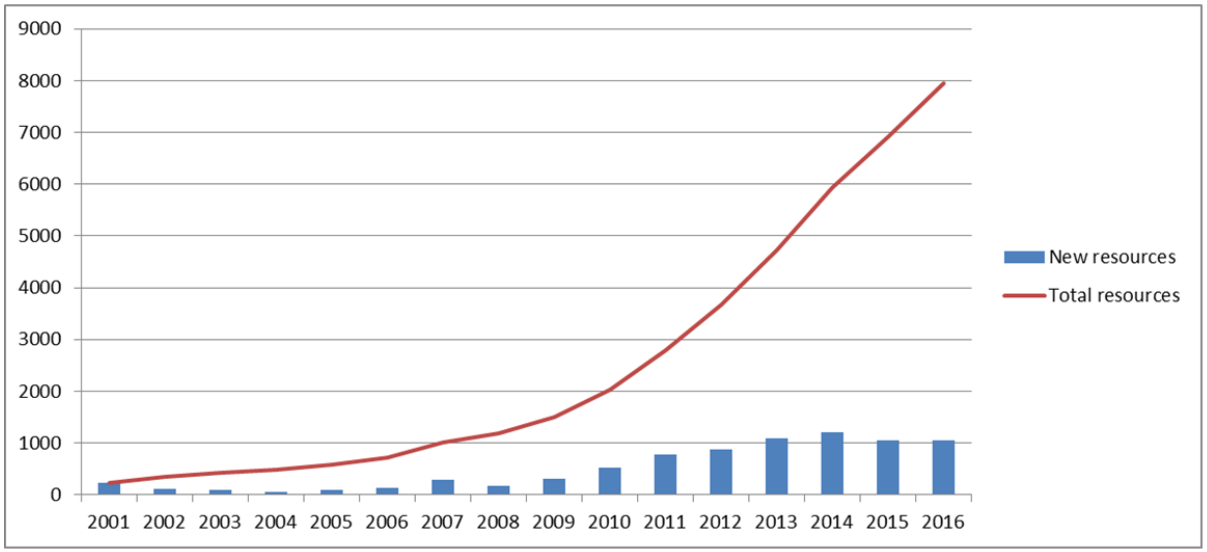
- Established, accepted science sourced from 130+recognized societies & publishing partners
- Stringent selection process supported by Editorial Advisory Board

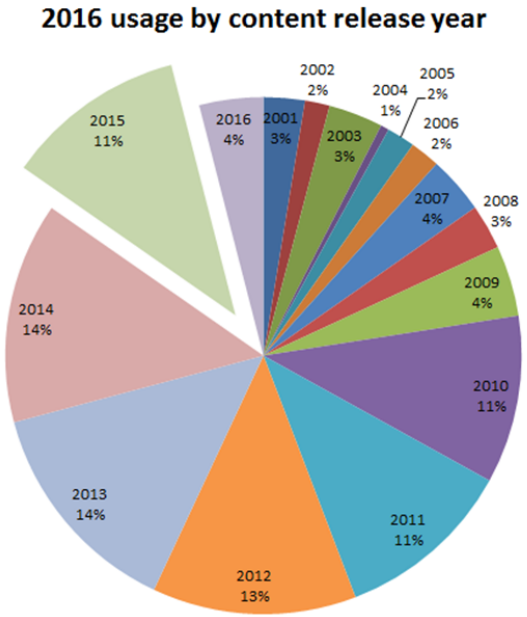
Over 130 trusted and diversified content sources

Depth and breadth of engineering topics to allow discovery and problem solving

- Adhesives, Coatings, Sealants & Inks
- Aerospace & Radar Technology
- Biochemistry, Biology & Biotechnology
- Ceramics & Ceramic Engineering
- Chemistry & Chemical Engineering
- Civil Engineering & Construction Materials
- Composites
- Computer Hardware Engineering
- Earth Sciences
- Electrical & Power Engineering
- Electronics & Semiconductors
- Engineering Management & Leadership
- Environment & Environmental Engineering
- Fire Protection Engineering & Emergency Response
- Food Science
- General Engineering & Project Administration
- Industrial Engineering & Operations Management
- Manufacturing Engineering
- Marine Engineering & Naval Architecture
- Mechanics & Mechanical Engineering
- Metals & Metallurgy
- Mining Engineering & Extractive Metallurgy
- Nanotechnology
- Nondestructive Testing & Evaluation
- Oil & Gas Engineering
- Optics & Photonics
- Pharmaceuticals, Cosmetics & Toiletries
- Plastics & Rubber
- Process Design, Control & Automation
- Safety & Industrial Hygiene
- Software Engineering
- Sustainable Energy & Development
- Textiles
- Transportation Engineering
- Welding Engineering & Materials Joining

- Content is Key (1 of 2)





- **39% of 2016 usage came from content added in last 3 years (2013-15)**
- **66% of 2016 usage came from content added in last 5 years (2011-15)**

- Content is Key (2 of 2)

Region	Number of Partners	% of Titles	% of Usage (2016 YTD)
EU	44	27%	19%
APAC	6	2%	1%
NOAM	80	71%	79%

- Content sourced from outside N. America accounts for 29% of all content on Knovel and 20% of all usage
- In 2016, 40% of new resources added from partners outside N. America

2017 New References

- Addition of 850 new titles, 11% growth
- Key partners are targeted

2017 Data & Equations

- Addition of 600 interactive equation worksheets , 40% growth
- 1.7M data points add/update
- Total 63M data points

Search Optimized for Engineers

Broadest Content from Diversified Sources

- Established, accepted science sourced from 130+recognized societies & publishing partners
- Stringent selection process supported by Editorial Advisory Board

Search Optimized for Engineers

- Finds data, hidden in tables, graphs, and equations
- "Understands" engineering language
- Allows numeric range search

A proven problem solving resource for Industry

- **Hundreds of thousands of Engineers Worldwide use Knovel**
- **74** of Fortune 500 companies
- "Top 10" engineering firms in Oil & Gas, Specialty Chemical, Aerospace & Defense and Engineering Design & Construction

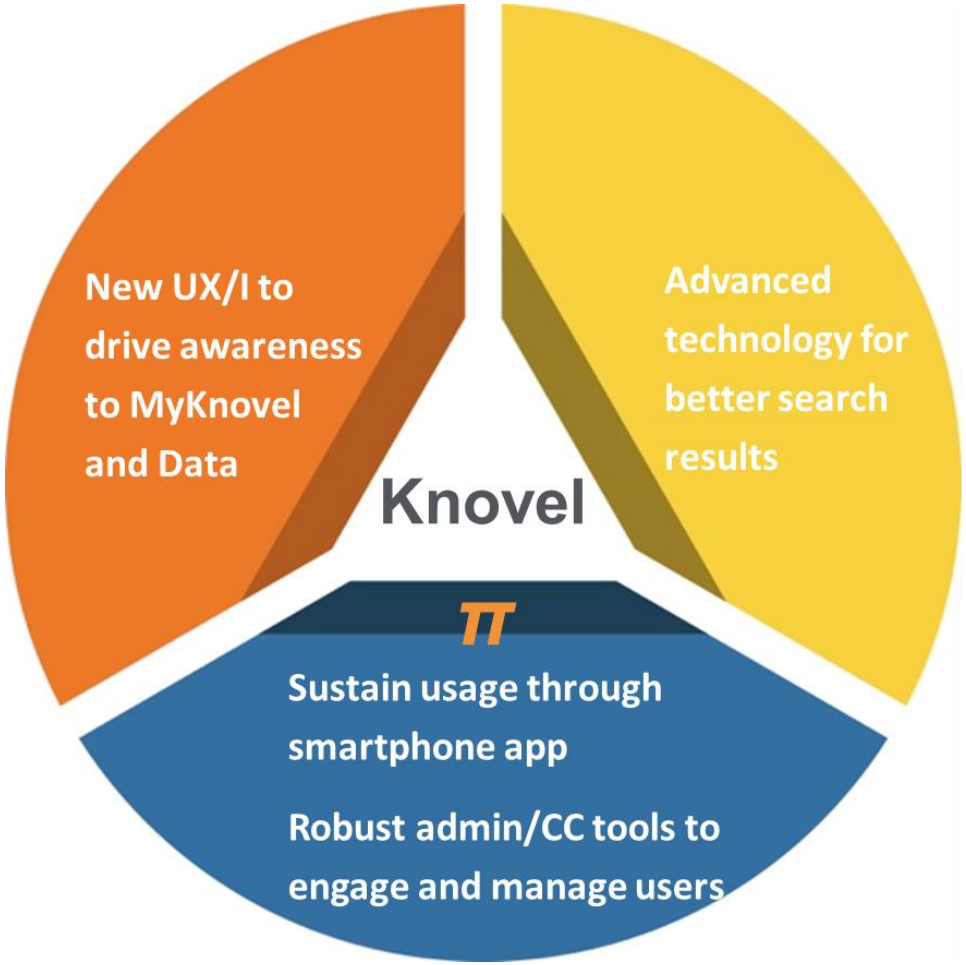
Students can solve realistic problem like a real engineer

- **Nearly 500 Institutions in 50+ countries**
- 20 of Top 24 US Engineering Schools & 31 of the top 50 World's Best Universities for Mechanical, Aeronautical, & Manufacturing Engineering
- Embraced by academic institutions of all sizes.

Massachusetts Institute of Technology
PRINCETON UNIVERSITY
University of California Berkeley
Imperial College London
Yale University
UNIVERSITY OF BIRMINGHAM
Georgia Tech
MANCHESTER 1824
PURDUE UNIVERSITY
NYP NANYANG THE INNOVATIVE POLYTECHNIC
NANYANG TECHNOLOGICAL UNIVERSITY
TEXAS A&M UNIVERSITY
STANFORD UNIVERSITY
香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
SINGAPORE POLYTECHNIC SP
KMUTNB
Chulalongkorn University จุฬาลงกรณ์มหาวิทยาลัย
McGill
The University of Hong Kong

Personalized insights for engineers

Knovel is the solution to deliver deep engineering insights using trusted content; through machine learning and analytics



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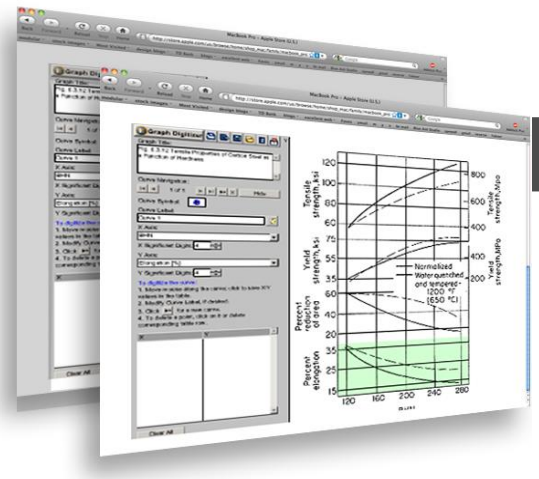
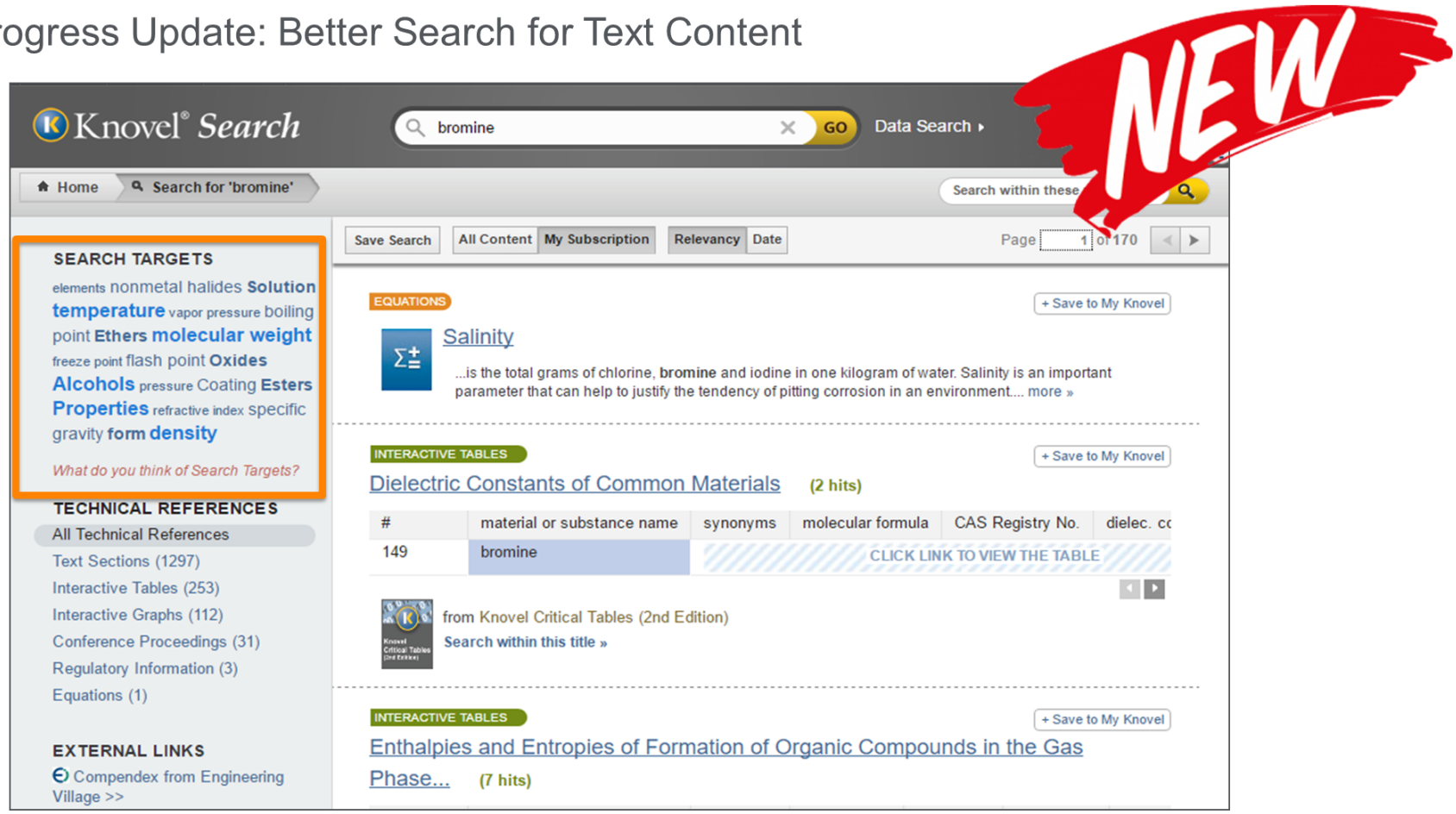


Interactive non-text content come "alive"

- More than 100,000 interactive tables, graphs and equations
- Customize and manipulate data as easily as sorting a spreadsheet
- Data Export preserves format and documents data source

- Progress Update: Better Search for Text Content



Interactive Graph

Knovel® Graph Digitizer

Fig. 15. Performance curves for various discrimination levels.
from ASM Handbook, Volume 17 - Nondestructive Evaluation and Quality Control

How to Use

X Axis
Detection threshold (number of pixels) le

Y Axis
Probability of detection (%)

X Significant Digits 4

Y Significant Digits 4

X	Y
5.872	91.16
7.523	84.57
8.898	79.46

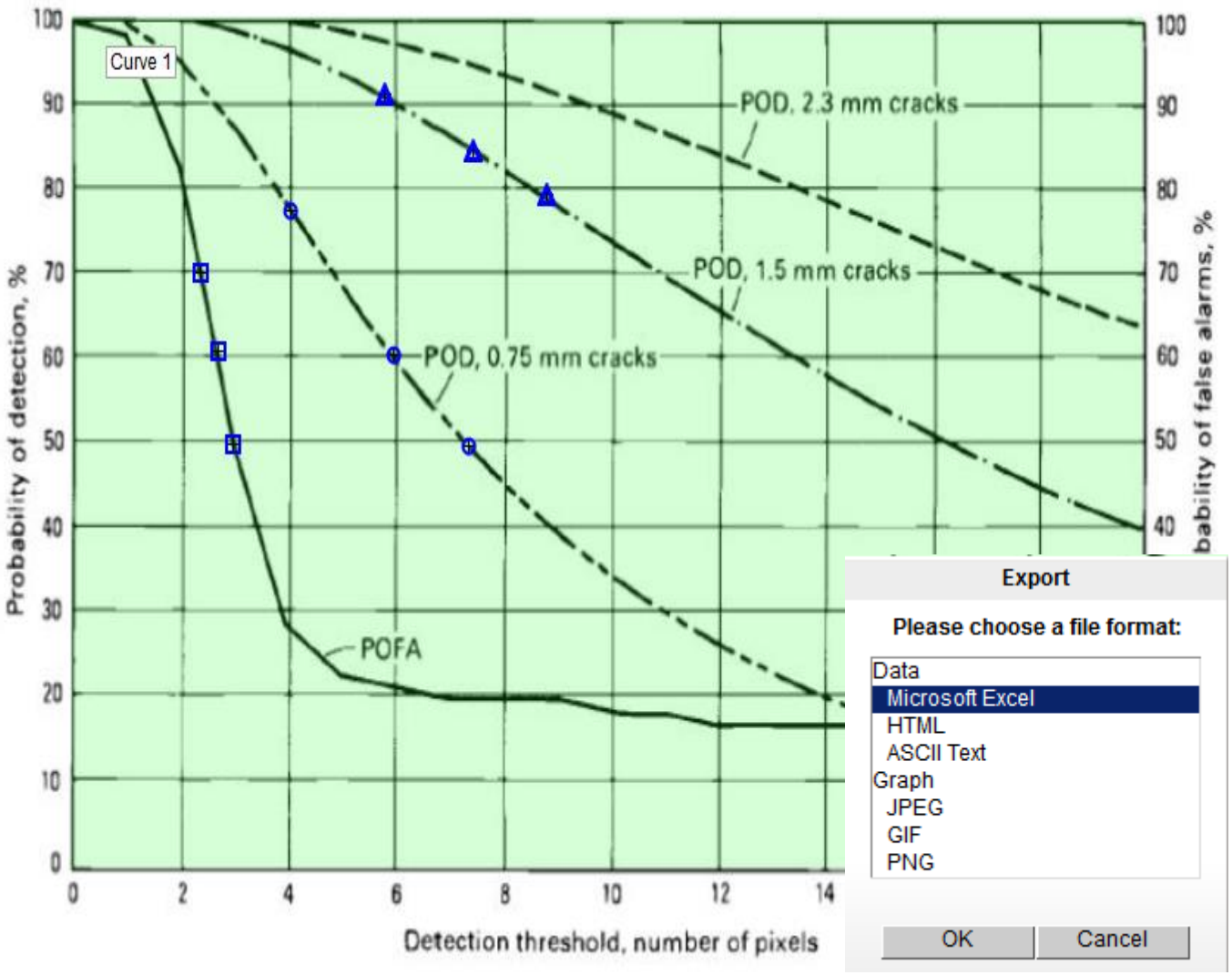
Active Area | Clear All

Curve Label
Curve 3 | Add

Curve Navigation
3 of 4 | Hide

Curve Symbol

Zoom (100%)



Export

Please choose a file format:

- Data
  - Microsoft Excel
  - HTML
  - ASCII Text
- Graph
  - JPEG
  - GIF
  - PNG

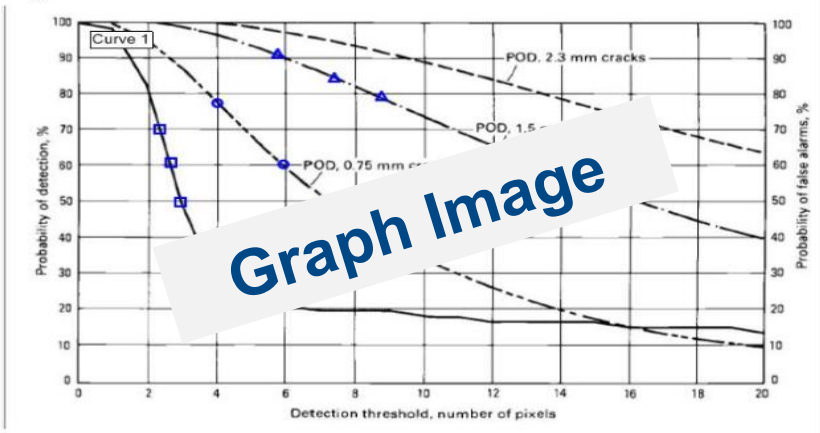
OK | Cancel

Interactive Graph

	A	B	C	D
1	Fig. 15. Performance curves for various discrimination levels.			
2				
3				
4				
5	Curve 1			
6	Detection threshold (numbe	Probability of detection (%)		
7	4.111	77.54		
8	6.037	60.73		
9	7.440	50.09		
10				
11				
12	Curve 2			
13	Detection thresh	tection (%)		
14		70.31		
15	2.763	61.16		
16	3.038	50.30		
17				
18				
19	Curve 3			
20	Detection threshold (numbe	Probability of detection (%)		
21	5.872	91.16		
22	7.523	84.57		
23	8.898	79.46		
24				
25				
26	ASM Handbook, Volume 17 - Nondestructive Evaluation and Quality Control			
27	Copyright © 1989 ASM International			

Microsoft Excel

Fig. 15. Performance curves for various discrimination levels.



Graph Image

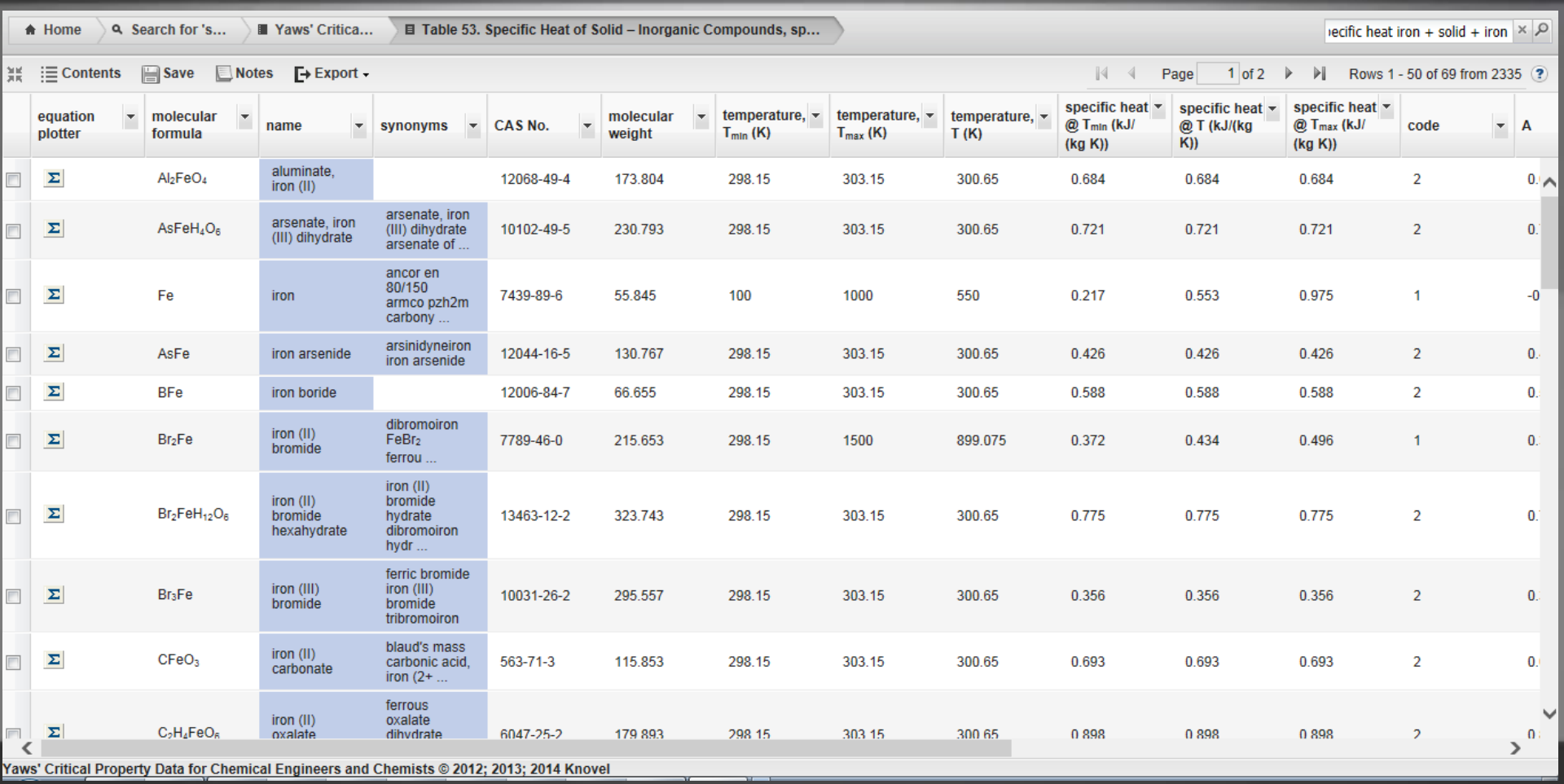
Curve 1	
Detection threshold (number of pixels) left	**Probability of detection (%)**
4.111	77.54
6.037	60.73
7.440	50.09

Curve 2	
Detection threshold (number of	**tection (%)**
2.433	
2.763	61.16
3.038	50.30

Curve 3	
Detection threshold (number of pixels) left	**Probability of detection (%)**
5.872	91.16
7.523	84.57
8.898	79.46

Data Image

Interactive Table



Home > Search for 's... > Yaws' Critica... > Table 53. Specific Heat of Solid – Inorganic Compounds, sp...

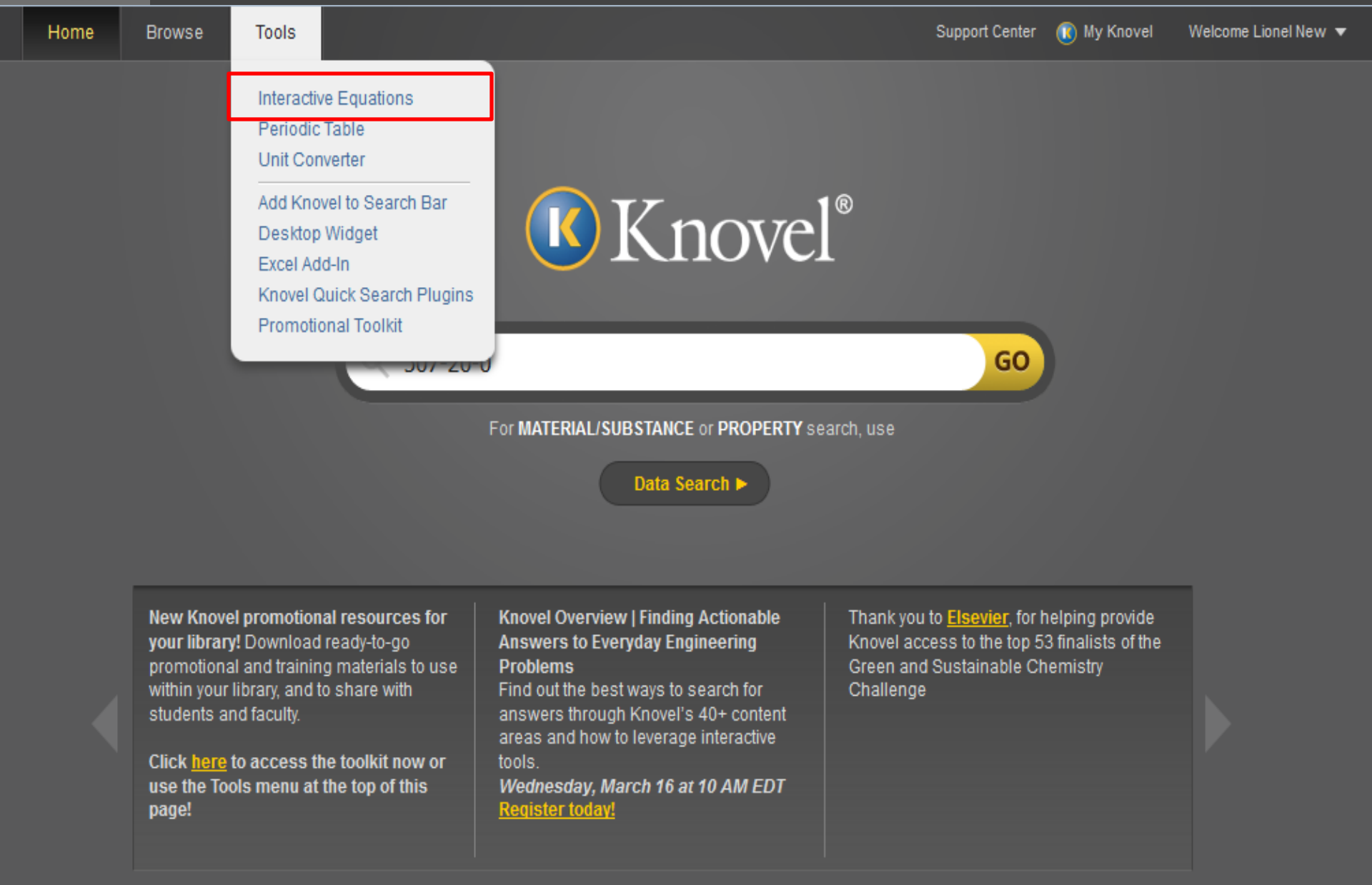
iecific heat iron + solid + iron

Contents | Save | Notes | Export | Page 1 of 2 | Rows 1 - 50 of 69 from 2335

equation plotter	molecular formula	name	synonyms	CAS No.	molecular weight	temperature, T_{min} (K)	temperature, T_{max} (K)	temperature, T (K)	specific heat @ T_{min} (kJ/(kg K))	specific heat @ T (kJ/(kg K))	specific heat @ T_{max} (kJ/(kg K))	code	A
Σ	Al_2FeO_4	aluminate, iron (II)		12068-49-4	173.804	298.15	303.15	300.65	0.684	0.684	0.684	2	0.
Σ	$AsFeH_4O_6$	arsenate, iron (III) dihydrate	arsenate, iron (III) dihydrate arsenate of ...	10102-49-5	230.793	298.15	303.15	300.65	0.721	0.721	0.721	2	0.
Σ	Fe	iron	ancor en 80/150 armco pzh2m carbony ...	7439-89-6	55.845	100	1000	550	0.217	0.553	0.975	1	-0
Σ	AsFe	iron arsenide	arsinidyneiron iron arsenide	12044-16-5	130.767	298.15	303.15	300.65	0.426	0.426	0.426	2	0.
Σ	BFe	iron boride		12006-84-7	66.655	298.15	303.15	300.65	0.588	0.588	0.588	2	0.
Σ	Br_2Fe	iron (II) bromide	dibromoiron $FeBr_2$ ferrou ...	7789-46-0	215.653	298.15	1500	899.075	0.372	0.434	0.496	1	0.
Σ	$Br_2FeH_{12}O_6$	iron (II) bromide hexahydrate	iron (II) bromide hydrate dibromoiron hydr ...	13463-12-2	323.743	298.15	303.15	300.65	0.775	0.775	0.775	2	0.
Σ	Br_3Fe	iron (III) bromide	ferric bromide iron (III) bromide tribromoiron	10031-26-2	295.557	298.15	303.15	300.65	0.356	0.356	0.356	2	0.
Σ	$CFeO_3$	iron (II) carbonate	blaud's mass carbonic acid, iron (2+ ...	563-71-3	115.853	298.15	303.15	300.65	0.693	0.693	0.693	2	0.
Σ	$C_2H_4FeO_6$	iron (II) oxalate	ferrous oxalate dihydrate	6047-25-2	179.893	298.15	303.15	300.65	0.898	0.898	0.898	2	0.

Yaws' Critical Property Data for Chemical Engineers and Chemists © 2012; 2013; 2014 Knovel

Interactive Equations



Interactive Equations

Knovel® *Interactive Equations*

KNOVEL SEARCH SHARE video

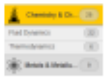
My Equations	0
My Calculations	0
Chemistry & Ch...	269
Civil Engineerin...	51
Electrical & Pow...	50
Electronics & S...	69
General Engine...	100
Mechanics & Me...	290

Solve problems easy and fast!

- Browse collections of practical equations and worked examples, use the built-in Equation Solver to calculate, and export your calculation for reports or sharing knowledge
- Create a worksheet from scratch by combining text, math, images, and plots. Have easy one-click access to a toolbox containing math functions, engineering units, programming structures, and math symbols used in engineering formulas

Use the left panel to browse through the collections. To preview the equation in HTML or calculate using the built-in Equation Solver, you need to register with Knovel. Registration is easy via a simple form. If you have already a Knovel account, please login.

For more information, please check out the resources located under the Help Menu ?.



Knovel Interactive Equations features a comprehensive, authoritative set of equations and working examples in the subject areas of **Chemistry** and **Chemical Engineering**, **Electronics** and **Semiconductors**, **General Engineering**, **Mechanics** and **Mechanical Engineering**, **Metals** and **Metallurgy**, **Oil & Gas**, and many others that are being added daily.

[WATCH THE VIDEO]

Built-in software allows you to calculate online and export your calculation in PDF, Mathcad, or HTML formats. Click this button on the right side of the screen to go directly to

- Progress Update: My Knovel To Go Smartphone App

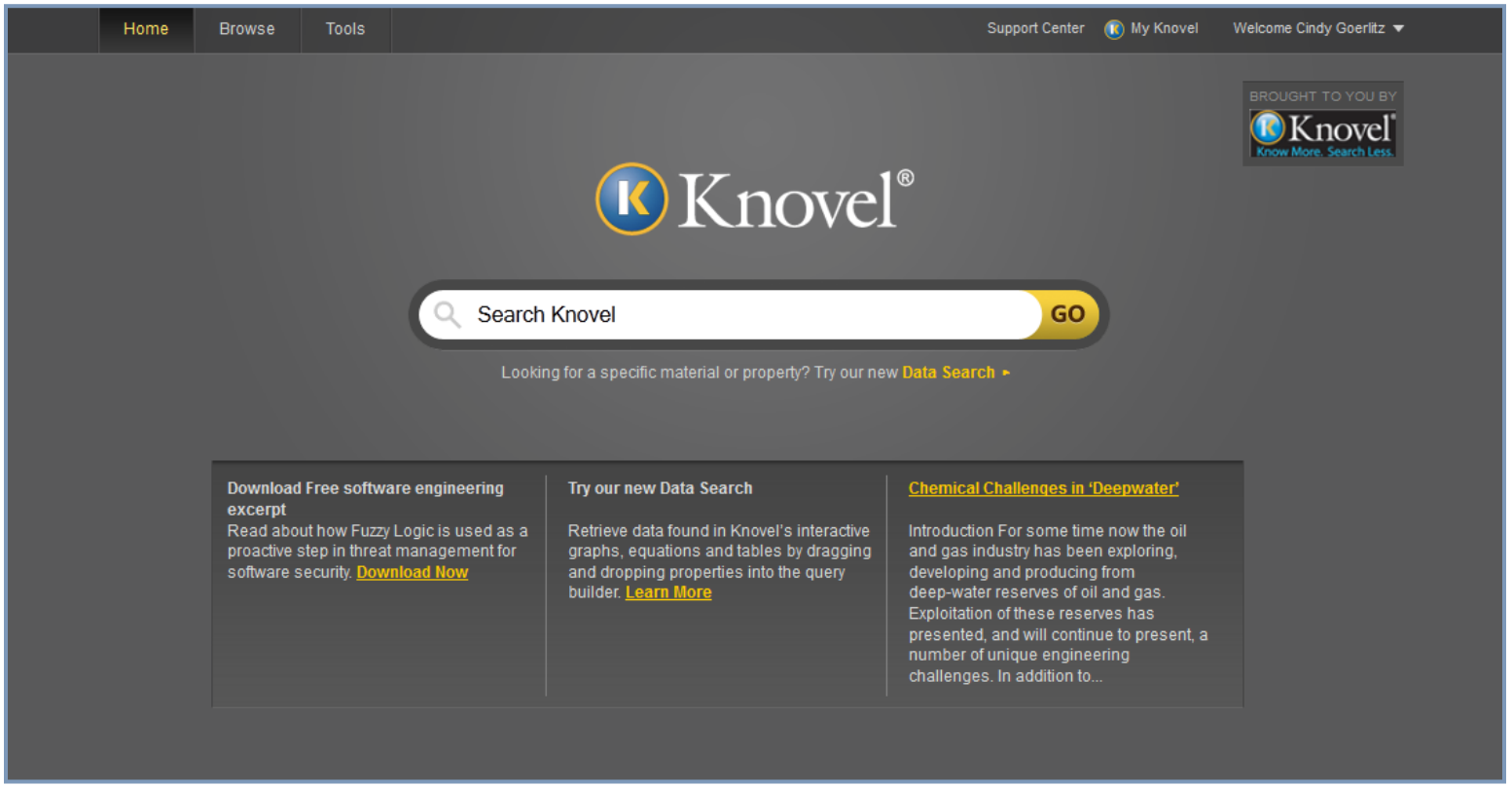
iOS

Android

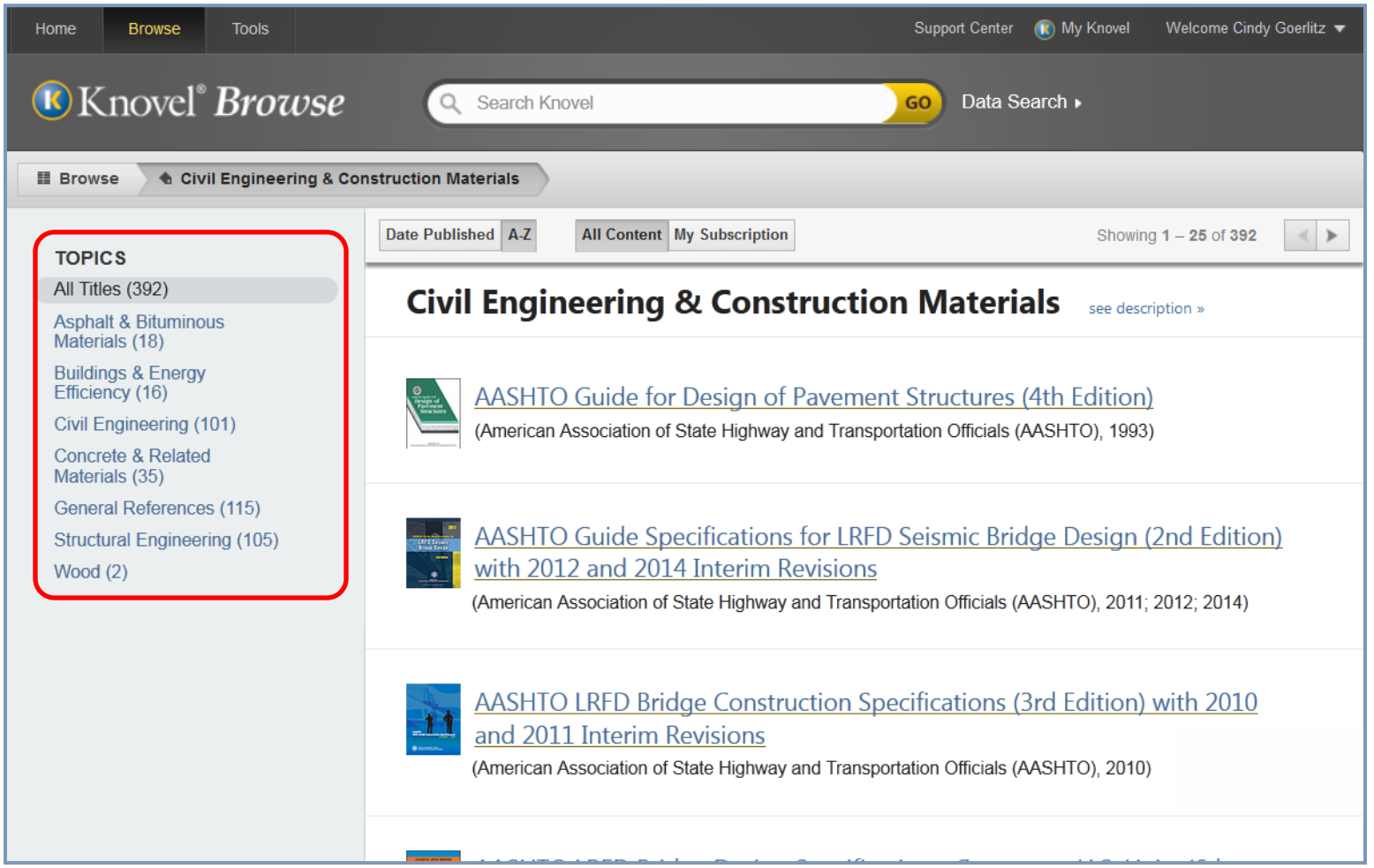
- ✓ NEW Smartphone app submitted for approval to iOS and Android app stores
- ✓ NEW Smartphone app on-track for Q1 delivery
- ✓ Tablet app updated and released

Explore Knovel

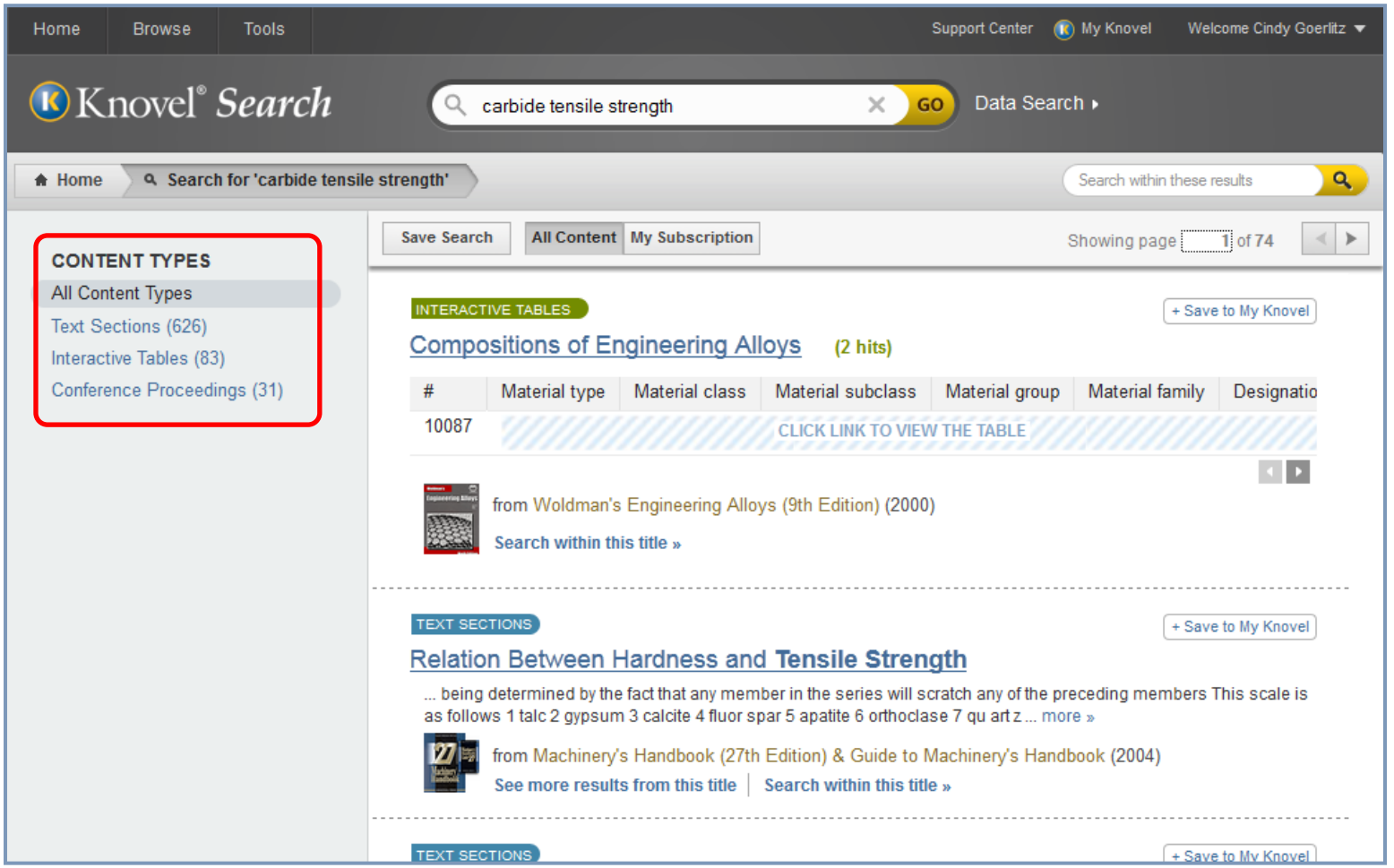
A SEARCH-centric User Experience



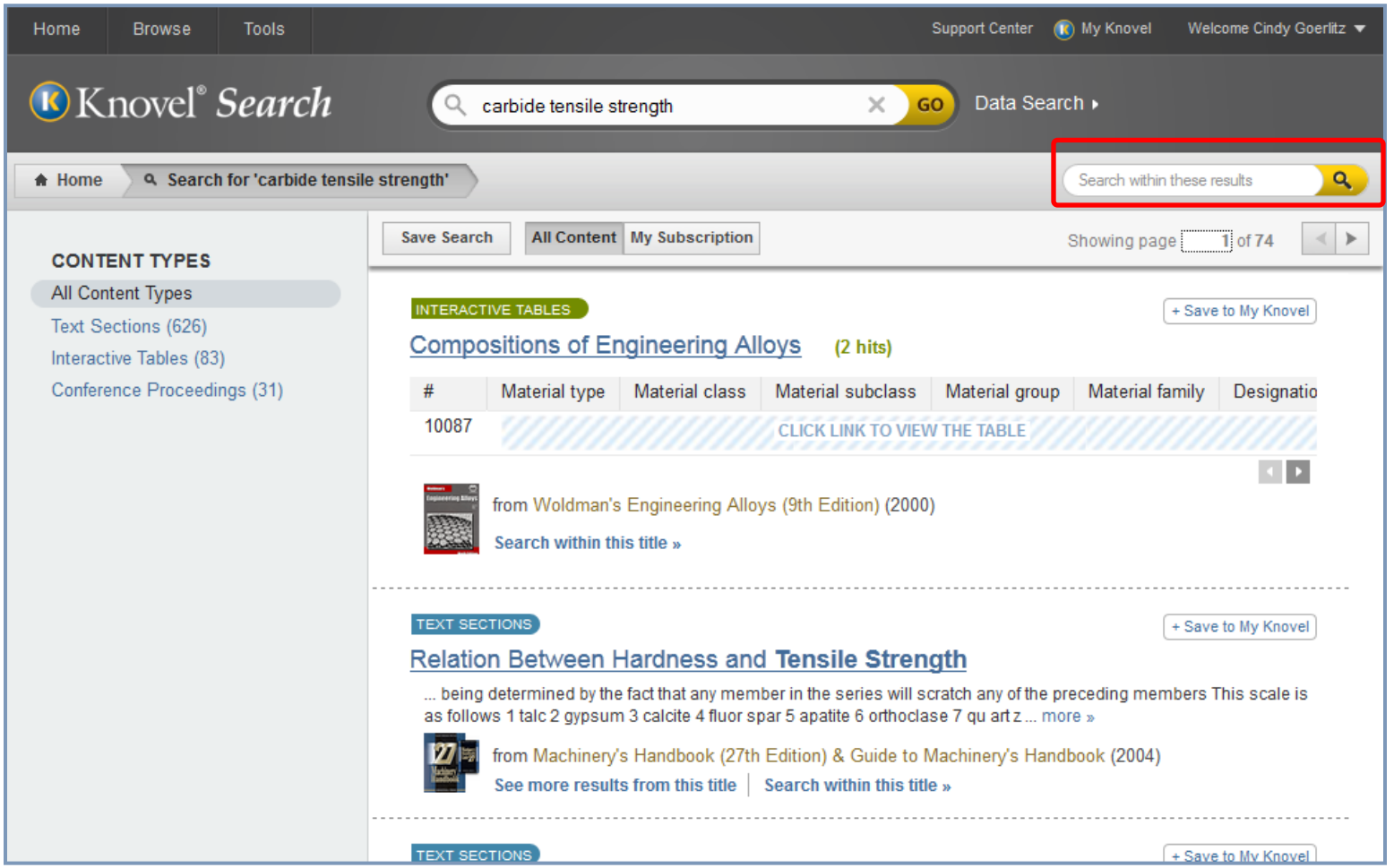
Faceting In Browse



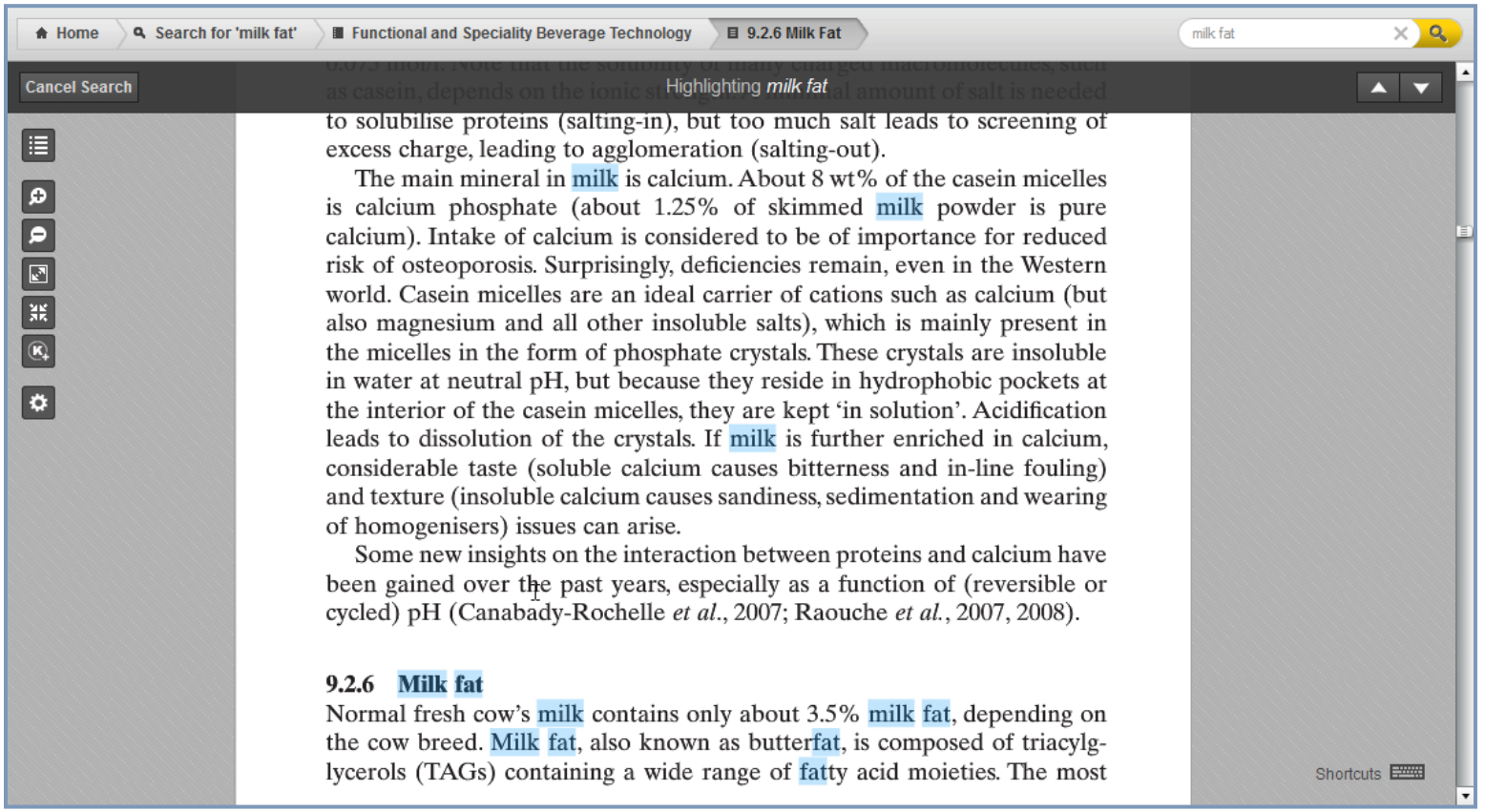
Faceting In Results



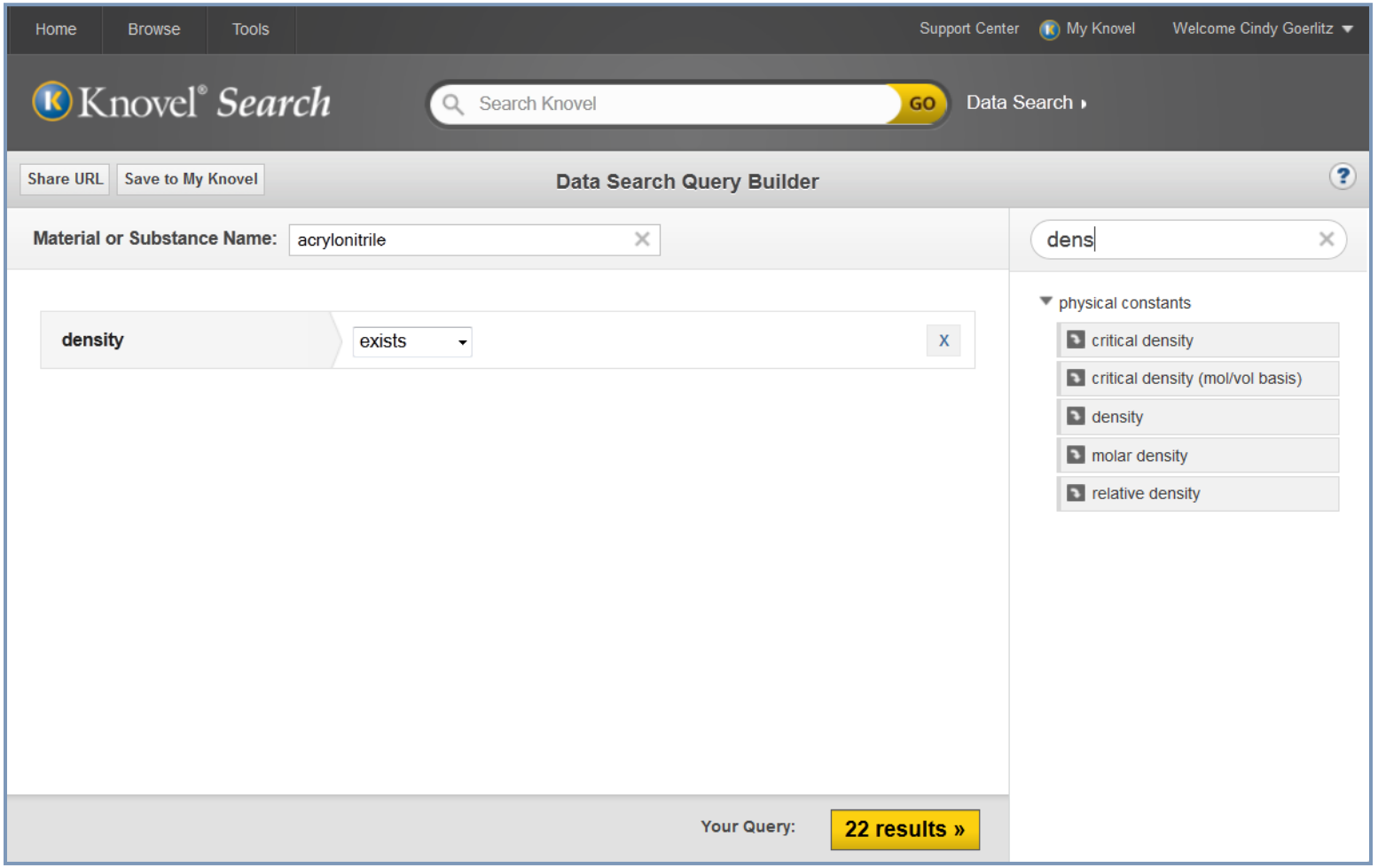
Search Within Results



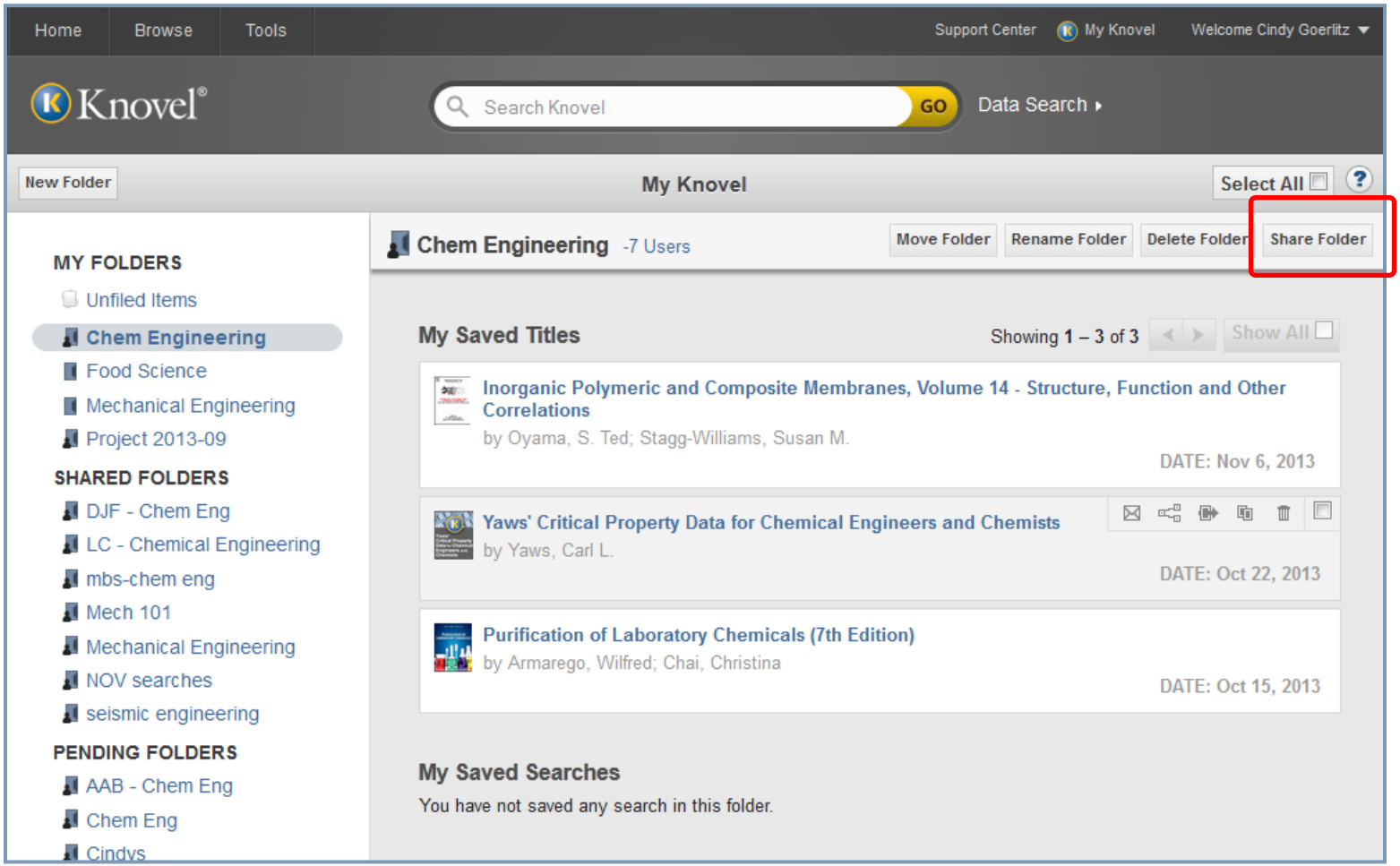
Knovel's Internal pdf Viewer



DATA SEARCH is easy with a Wizard UI



My Knovel with Shared Folders



Design Enhancement + Teaching Excellence = Competent and Successful Engineer

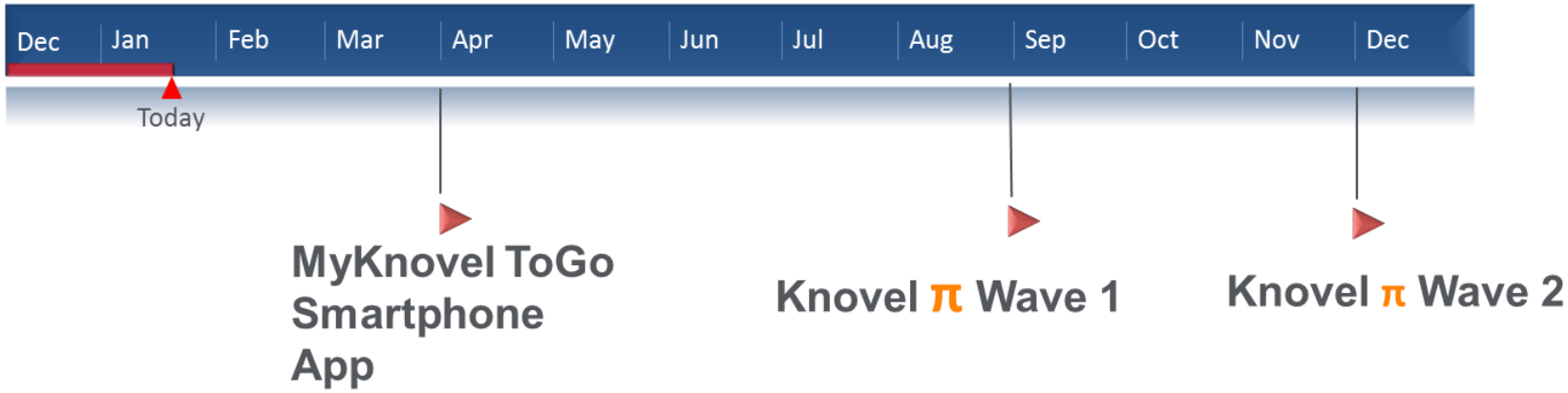
- **Superior discovery to support new applications in research and design:**
  - Optimized for engineers. Easily find data hidden in interactive tables, graphs, charts and equations that can be manipulated, analyzed and exported with citations.

- **Knovel is An Asset for Teaching and Learning:**
  - Helps faculty integrate technology into the classroom and teaching methods to achieve teaching excellence and meets the challenges of today's tech savvy students.
  - Professors can easily assign interactive study materials to their students to help keep them engaged.
  - Professors can use to identify supplementary readings, develop homework assignments based on a wide-array of real-world problems.

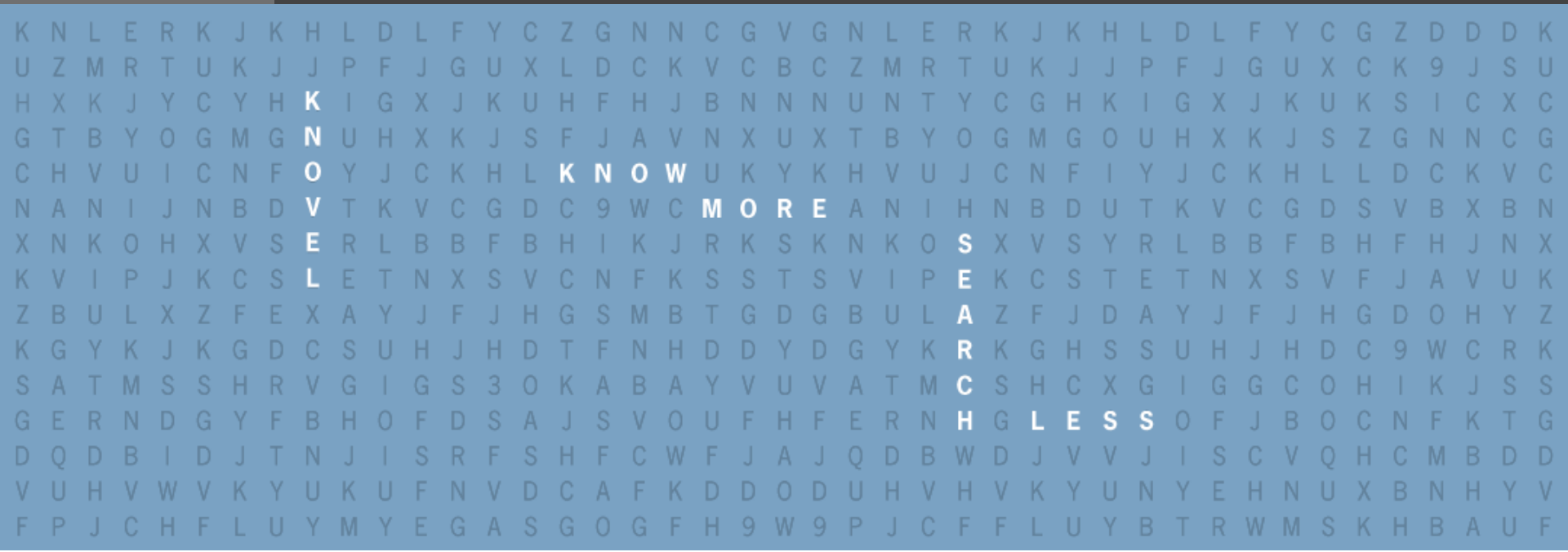
- **Knovel Helps to Educate Competent, Competitive, Innovative & Successful Engineering Professionals**
  - Students will prepare for a competitive workforce by using the same research tools and trusted information used by engineers at leading companies worldwide.

"**[Knovel] has become the gold standard among its target user base**, based on its ability to anticipate the needs of its users and serve them as quickly and efficiently as possible."

- "STM E-Books: 2012 Market Size, Share, and Forecast" by Laura Ricci



Key Delivery Items	Delivery Dates
Content additions/updates	On-going monthly
Smartphone APP	March, 2017
New UX/I for Knovel website	August, 2017
New features to drive usage of Data and MyKnovel	August, 2017
Search improvements	August, 2017
New features for better user management	August, 2017
Simpler user registration and engagement	August, 2017
Additional capabilities across all areas Knovel π	December 2017



Thank you

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